



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,872	12/13/2000	Yigal Katzir	140/01667	9284

7590 02/24/2003

William H. Dippert, Esq.
c/o Cowan, Liebowitz and Latman, P.C.
1133 Avenue of the Americas
New York, NY 10036-6799

EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
----------	--------------

2863

DATE MAILED: 02/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,872

Applicant(s)

KATZIR ET AL.

Examiner

Michael P Nghiem

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 and 61-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49-54 and 61-70 is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

The Amendment filed on December 12, 2002 has been acknowledged.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by De Lange (US 3,447,856).

De Lange discloses all the claimed features of the invention including:

- an apparatus and method for transmitting information at a data rate, comprising:
 - a pulsed light source (10) that produces pulsed light having a pulsed repetition rate (Fig. 1); and
 - a modulator (modulation means, column 3, lines 70-74) that asynchronously modulates the pulsed light at the data rate, wherein the data rate is higher than pulse repetition rate (column 1, lines 53-57);

- the pulsed light source is a line source and wherein the modulator spatially modulates the line (column 1, lines 53-57);
- the modulator independently modulates different sections of the line at the data rate (modulates 1 and 1', Figs. 2-5);
- the pulsed light comprises a laser beam (Fig. 1).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-25 and 29-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Lange in view of DeBenedictis et al. (US 4,205,348).

De Lange further discloses the following claimed features of the invention:

- the pulsed light is produced utilizing a pulsed light generator (10) comprising a beam generator that produces an initial pulsed light beam having an initial pulse repetition rate (Fig. 2);
- a pulse repetition rate multiplier (11), which receives the initial pulsed light beam and produces at least one pulsed light beam having a higher pulse repetition rate than the initial rate (Fig. 3);

Art Unit: 2863

- a second repetition rate multiplier (12) that receives an output beam from the repetition rate multiplier and produces an output beam having a repetition rate higher than the repetition rate of the beam that it receives (Fig. 4);
- the first repetition rate multiplier and the second multiplication rate multiplier each double the repetition rate (column 2, lines 10-13);
- the increased pulse repetition rate is twice the initial pulse rate (Figs. 2-5);
- the increased pulse repetition rate is three times the initial pulse rate (Figs. 2-5);
- the increased pulse repetition rate is four times the initial pulse rate (Figs. 2-5);
- the increased pulse repetition rate is greater than four times the initial pulse rate (Figs. 2-5);
- the power contained in the higher repetition rate pulses is substantially equal to the power of the initial pulsed light beam (column 3, lines 68-70).

However, De Lange does not disclose the following claimed features:

- a scanner that scans the modulated pulsed light over the surface,
- the modulated light scans over the surface in a first direction and wherein the surface moves in a direction perpendicular to the direction of scanning such that the surface is illuminated by a raster scan.

Nevertheless, DeBenedictis et al. discloses a scanner (27) that scans the modulated pulsed light over the surface (14), wherein the modulated light scans over the surface in a first direction (12, 13) and wherein the surface moves in a direction perpendicular (19)

Art Unit: 2863

to the direction of scanning such that the surface is illuminated by a raster scan (Fig. 1) for the purpose of forming an image on the photosensitive surface.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide De Lange with a scanner as disclosed by DeBenedictis et al. for the purpose of forming an image on the photosensitive surface.

Allowable Subject Matter

3. Claims 49-54 and 61-70 are allowed.

Reasons For Allowance

4. The combination as claimed wherein a modulating signal responsive to the data signals for a time period longer than said time interval, such that the modulating signal is operative to modulate at least two successive pulses and wherein an attribute of the modulating signal changes between at least some of the two successive pulses (claim 49) or a combination of a wavelength converter external to the pulsed light source and a modulator that receives the wavelength converted pulsed light and modulates it at a data rate (claim 61) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

5. Applicant's arguments filed on December 12, 2002 have been fully considered but they are not persuasive.

With respect to the 35 USC 102 and 103 rejections, Applicants argue that neither DeLange nor DeBenedectis anticipates or suggests any particular apparatus or method for modulating the optical pulses which are output by the optical pulse multiplier and using a data rate which is higher than the repetition rate.

Examiner's position is that DeLange discloses an apparatus and method (Fig. 1) for modulating the optical pulses (via modulation means, column 3, lines 70-74) which are output by the optical pulse multiplier (modulation means is arranged on optical path of multiplier, Fig. 1, column 3, lines 73-74) and using a data rate which is higher than the repetition rate (column 3, lines 68-70, Fig. 5 shows pulse rate higher than pulse rate of original pulse, Fig. 2; thus the data (modulation) rate is higher than repetition rate of original pulse).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2863

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (703) 306-3445. The examiner can normally be reached on M-H from 6:30AM – 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached at (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-

0956.


MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

February 21, 2003